



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,396	04/22/2005	Toru Sasaki	SONYJP 3.3-1032	1596
530 7590 09/24/2007 LERNER, DAVID, LITTENBERG, KRUMHOLZ & MENTLIK 600 SOUTH AVENUE WEST WESTFIELD, NJ 07090			EXAMINER LEE, PING	
			ART UNIT 2615	PAPER NUMBER
			MAIL DATE 09/24/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/532,396

Applicant(s)

SASAKI, TORU

Examiner

Ping Lee

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/24/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 11, lines 21-22, the statement "each said projection screen is caused to be flush with each other" is confusing. Since there is only one projection screen being claimed, it would not make sense to claim that the screen being flush with itself.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-7 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 3-106298 (hereafter patent '298).

Regarding claims 1, 7 and 11, patent '298 discloses an array speaker apparatus comprising:

a frame (see Fig. 2, the outer most structure of 11);

a plurality of speaker units (12s);

a plurality of cabinets (as shown in Fig. 1b, composed of vertical and horizontal walls for supporting the speakers) arranged within the frame each having an opening portion in front thereof (the portion that is in contact with the front of the speakers as shown in Fig. 1b) and each adapted for accommodating one of the plurality of speaker units so that vibration plates (the moving part within the speaker that moving the diaphragm) of the plurality of speaker units are located at an internal side thereof relative to an end surface of the opening portions of the plurality of cabinets, in which the opening portion of each cabinet within the frame is arranged to face in the same direction (as shown in Fig. 1b, the opening portions with the front of the speakers attached to are all facing toward the left) to form a sound radiating surface; and

a projection screen (14) serving as a sound transmission screen for displaying a projected image,

wherein the plurality of cabinets are arranged so that the end surface of the opening portions thereof are flush with each other, and adjacent cabinets are arranged in close contact with each other, and

the projection screen is attached in a state substantially in contact with the end surface of the opening portions such that each opening portion of each cabinet arranged within the frame faces the projection screen.

Regarding claim 2, as shown in Fig. 1b, the screen (14) is extended and stretched toward the opening portions of the plurality of cabinets in such a manner to

cover all plane surfaces having the opening portions of the plurality of cabinets (the screen covers all speakers' fronts and it covers all opening portions as shown).

Regarding claims 3-6, the claimed buffer materials read on the air between the screen (14) and the opening portion of the cabinets.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over patent '298 in view of JP 5-199576 A (hereafter patent '576).

Regarding claim 8, patent '298 fails to show power amplifiers. However, one skilled in the art would have recognized that the speakers require power amplifiers to generate the drive signal. Patent '298 discloses a speaker layout without providing any accompanying circuitry. One skilled in the art would have expected that any well known speaker driving circuit could be used without generating any unexpected result. Patent '576 teaches such a driving circuit with a power amplifier. Thus, it would have been obvious to one of ordinary skill in the art to modify patent '298 by utilizing the amplifier as taught in patent '576 in order to drive the speaker properly.

7. Claims 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over patent '298 in view of JP 5-244550 A (hereafter patent '550).

Regarding claims 8-10, patent '298 fails to show a directivity formation circuit. Patent '298 discloses speaker layout without providing any accompanying circuitry.

One skilled in the art would have expected that any well known speaker driving circuit could be used without generating any unexpected result. Patent '550 teaches such a driving circuit with power amplifiers and filter circuits. Thus, it would have been obvious to one of ordinary skill in the art to modify patent '298 by utilizing the driving circuit as taught in patent '550 in order to drive the speaker properly.

Response to Arguments

8. Applicant's arguments filed 8/24/07 have been fully considered but they are not persuasive.

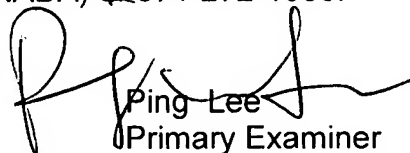
On p. 7, applicant argued that the '298 patent appears to specifically disclose arranging the speakers in different arrangements such that not all of the openings for the speakers face the projection screen. Examiner disagrees. Applicant misinterpreted what was being disclosed in Fig. 1b of patent '298 in view of Fig. 1a. As clearly shown in Fig. 1b of patent '298, all speakers facing the same direction (the front of the speaker facing toward the left). Although some speakers having enclosed back (such as 12a) and some do not (such as 12b), they are related to the design of the speaker cabinet, which has not been specifically claimed. However, the direction of the speaker axis is completely not affected by the cabinet design. All speaker axis are directed toward the same direction facing the screen. With regard to different cabinet design, Parker (this reference was being used to combined with patent '298 in the previous office action. However, the claims have been amended that it was not longer necessary to modify

patent '298 in view of Parker) has taught the benefit of using all closed-back speaker cabinets for improving the frequency response.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ping Lee whose telephone number is 571-272-7522. The examiner can normally be reached on Monday, Wednesday and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Ping Lee
Primary Examiner
Art Unit 2615

pwl